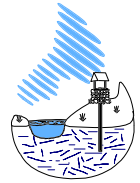




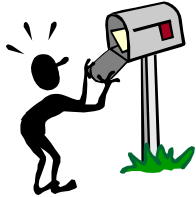
# THE SOURCE



NEWSLETTER OF THE NHDES DRINKING WATER SOURCE PROTECTION PROGRAM

WINTER 2001

## Source Assessment Reports Coming Soon to a Mailbox Near You



The Drinking Water Source Protection Program recently began mailing out the first completed Drinking Water Source Assessment reports. These reports consist of a map, land use key, and vulnerability rankings for several criteria. Information concerning protection options is also included. The reports are intended to provide information that will be useful to water suppliers in better protecting their sources.

Completed assessment reports are also available through our website at [www.des.state.nh.us/dwspp/reports.htm](http://www.des.state.nh.us/dwspp/reports.htm)

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Each source's vulnerability determination is based on data stored in DES's Geographic Information System (GIS) database as well as data gathered during field work over the last two summers. Additional data needed to

complete the remaining reports will be collected during the summer of 2001.

Completed reports are being sent to the corresponding system owner and the planning board of the municipality in which the system is located. Other municipal entities such as the conservation commission, the health officer, and top elected officials will receive a letter indicating that the report has been sent. Assessment re-

ports will be generated in random order for each of the approximately 3,000 public drinking water sources in New Hampshire. Over 1400 assessments have been completed, and we anticipate that approximately 300 reports will be sent out by the end of this year. The remaining reports will be published through May 2003.

## January Workshop Can Help You Determine How to Make Use of Your Assessment Report Results

Systems that have begun receiving their assessment reports (see story above) may wonder what they are expected to do with the information. In addition to summarizing the results in Consumer Confidence Reports, it is our hope that the vulnerability rankings will help systems and municipalities determine where they should focus their source protection efforts.



To help systems that would like to implement additional protection measures, we are hosting a source protection workshop on January 22, 2001 at the DES offices in Concord. Water suppliers, municipal officials and technical service providers involved in source protection are encouraged to attend. To register, contact New England Water Works Association at (508) 893-7979.



# Spotlight on...Stratham

## Town Hires Groundwater Steward

As in many small New Hampshire towns, Stratham's 6,000-7,000 residents are not served by a municipal water supply system. Instead, approximately 30 percent of the town's residents are served by 17 small community systems, each of which relies on groundwater sources to serve condominiums, subdivisions, or mobile home parks. The other 70 percent use on-site private wells.

Recognizing the need to protect both public and private drinking water sources, the Town of Stratham asked DES in 1993 to reclassify *all* of the town's groundwater as "locally important." Under DES's Groundwater Reclassification Program, the change in designation required the Town to establish a groundwater protection program, and provided the Town with the authority to enforce DES's Best Management Practices (BMP) Rules for the safe handling and storage of regulated substances. Not only do both pri-

vate and public water users benefit by having their groundwater protected, but all community and non-transient systems in Stratham benefit by being granted money-saving Phase II/V chemical monitoring waivers.

Stratham's groundwater protection program involves a town-wide inventory of potential contamination sources, which is updated every three years followed by on-site surveys at certain businesses for compliance with the BMP rules. Steve Buchanan, Stratham's part-time groundwater protection coordinator, stresses the importance of gaining the support of residents and businesses for this type of program. Since coming on board in early 2000, (the program was previously administered by the code enforcement officer) Buchanan has conducted an expanded inventory of potential contamination sources, prepared letters to send out to *all* property owners in town, and has set up a database to manage the inventory and survey information. The next step, according to Buchanan, is to "start knocking on doors."

For more information about groundwater reclassification, please call 271-7061 or see our fact sheet at [www.des.state.nh.us/factsheets/ws/ws-22-2.htm](http://www.des.state.nh.us/factsheets/ws/ws-22-2.htm).

## DES Teams Up With USGS on Groundwater Availability Project

**D**ES and the United States Geological Survey (USGS) are conducting a statewide Groundwater Availability Assessment Project. The project is designed to answer questions about how much water is available in a subbasin based upon both the physical properties of the environment of a hydrologic system (subbasin and aquifer) and the current water usage patterns. Through the project, the two partners will develop a tool to estimate groundwater contributions to base flow and seasonal flow durations and frequencies in streams throughout New Hampshire.

DES and USGS will jointly develop hydrologic data sets, hydrologic statistical relationships, geographical information system (GIS) land feature data coverages, and water use data sets for the entire state of New Hampshire. This information can then be used by agencies, municipalities, planners, and interest groups in a GIS-based relational database to construct water availability and use analysis reports for any basin within the state.

Work on the Groundwater Availability Assessment Project is ongoing, and is scheduled to be completed by December 2002. A comprehensive scope of work for this project may be obtained by contacting Brandon Kernan at 271-0660 or [bkernen@des.state.nh.us](mailto:bkernen@des.state.nh.us)

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# Closer To Home

*Information for well owners and  
public water system customers*

## What You Should Know About Nitrate in Drinking Water

Nitrate is a naturally occurring chemical compound that is formed in soil when nitrogen and oxygen combine. Small amounts of nitrate in the environment are normal, but large amounts can pollute groundwater, causing health effects for certain segments of the population.

The U.S. Environmental Protection Agency (USEPA) has set a maximum contaminant level (MCL) for nitrate at 10 milligrams per liter (mg/L). Nitrate levels in excess of 10 mg/L are a health concern for infants through 6 months and can cause a condition known as methemoglobinemia or “blue baby” syndrome. Symptoms of this condition include shortness of breath and blueness of skin.

Nitrate is a component in chemical fertilizer and sanitary waste from humans and animals. Therefore, the primary causes for nitrate contamination in groundwater are animal wastes, fertilizers, and failed or overloaded septic systems.

The following steps will help reduce the risk of nitrate contamination:

1. Reduce your use of fertilizers.
2. Be sure your well is properly constructed and located up gradient of your septic system.
3. Properly operate and maintain your septic system.

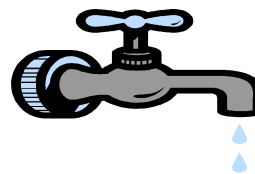
Nitrate is odorless and colorless so the only way to detect its presence is to have your water tested. Public water systems are tested on a regular basis, but an individual property owner is responsible for testing private well water. The EPA and DES recommend testing private wells for nitrates every one to three years. The DES laboratory will conduct a nitrate test on drinking water for \$7 per sample.

When nitrate levels are elevated, an evaluation should be made relative to whether the source is most likely fertilizers or improper waste

disposal (human or animal). Then, further testing may be necessary to pinpoint the source.

Boiling nitrate-contaminated water will not make it safe. Nitrate can be removed from water supplies by several treatment processes including ion exchange, distillation, and reverse osmosis. However, before implementing any treatment process, it is most important to identify and abate the source of the nitrate.

Further information about these treatment processes and drinking water contamination can be found in our fact sheets at [www.des.state.nh.us/ws.htm](http://www.des.state.nh.us/ws.htm) or by calling DES’s Water Supply Engineering Bureau at 271-3139.



## Watershed Success Stories on the Web

A new resource entitled, “Watershed Success Stories: Applying the Principles and Spirit of the Clean Water Action Plan” is now available at [www.cleanwater.gov](http://www.cleanwater.gov). The report highlights significant accomplishments in community restoration efforts by showcasing thirty success stories from around the country. These stories demonstrate how cooperation among federal, state, and local partners can lead to innovative restoration solutions addressing a broad spectrum of water quality problems.

## EPA Launches New Source Water Website

USEPA’s Office of Groundwater and Drinking Water (OGWDW) has posted a new homepage and site for the source water program at [www.epa.gov/safewater/protect.html](http://www.epa.gov/safewater/protect.html). The site gives access to basic program information, contacts, and web links and now features “Reliable Sources,” a new web guide of internet-based source water resources that were either produced by or paid for by EPA.



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## Water Supply Land Grant Program Underway

DES's Water Supply Land Grant Conservation Program is officially up and running. The project eligibility deadline of November 1, 2000 has passed and DES has received seven applications for projects that collectively request approximately \$1.8 million. These proposed projects would protect an additional 2,118 acres in water supply lands.

The final application deadline is January 1, 2001. It is possible for interested parties that did not meet the eligibility deadline to still apply. The eli-

gibility deadline was intended to assist communities and non-profit water suppliers in determining whether their projects would be eligible for the funding. The final application requires additional information, including an appraisal, title examination, property survey, and potentially an environmental site assessment. At present, it appears that the \$1.5 million, allocated for this year, will be spoken for. We will continue to report on the Water Supply Land Grant Program in future issues.

## DWSPSP Unveils New Web Look, Posts New Information

The Drinking Water Source Protection Program has reorganized its web pages in an

effort to provide more information to our users and to make that information easier to find. In addition, the site has a new look thanks to an overhaul of the entire DES site. We encourage you to visit us at [www.des.state.nh.us/dwspsp](http://www.des.state.nh.us/dwspsp)

### Receive *The Source* Electronically!

To more efficiently serve our readers, DWSPSP is offering all subscribers to *The Source* an opportunity to electronically view the newsletter. Electronic subscribers will receive an e-mail message with a link to a PDF document of the latest issue on our website.

#### Advantages:

- ◆ Receive the newsletter earlier than regular subscribers.
- ◆ No more typing in long URLs - references to websites and electronic documents in the newsletter will be hotlinked!

To subscribe to the electronic version, send an e-mail message to [nclegg@des.state.nh.us](mailto:nclegg@des.state.nh.us). Please include your name and regular mailing address (as it reads on the label below) and the words "Subscribe me to *The Source* in the body of the message.

New information that is now found on our pages includes:

- ◆ Application forms for local water protection and water supply land grants.
- ◆ Drinking Water Source Assessment Reports.
- ◆ Administrative rules.
- ◆ Past issues of *The Source*.
- ◆ Model ordinances and watershed rules.
- ◆ Wastewater discharge registration forms.
- ◆ Youth education resources.

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